

present, it was about a drachm of muco-purulent. One however was contracted horizontally, and contained five ounces of limpid urine.

23. *Cholera at Paris.*—The cholera is usually represented as having broken out unexpected and suddenly at Paris on the 26th of April last. This is not altogether correct. "Of those physicians," says the editor of the *Gazette Médicale*, "who unprejudicedly observed the development of the reigning constitution, there is not one who did not foresee and almost determine the precise period of the appearance of the cholera. It is especially permitted for us to say so, since, in June last, we pointed out the prevailing constitution as one of the forerunners of the epidemic. This disease was regarded by us as a necessary and inevitable consequence of the elements which we indicated. We will go further; we have had in our possession for at least three months accounts of several unquestionable cases of cholera, occurring under the observation of men of education and of unimpeachable veracity; but the fear of alarming a population already exceedingly uneasy, induced us to preserve silence until the disease has become more completely developed. This development it has attained with great rapidity. Since Monday, March 26th, the period at which the first well-attested cases are said to have occurred, the disease has been going on increasing by tenfold."

Between the 26th of March and the 20th of April, 10,476 persons died in Paris of cholera; and it is said that upwards of 30,000 persons were affected with the disease, not including those who suffered from slight symptoms, evidently depending upon the epidemic constitution; as diarrhœa, borborygmi, cramps of the stomach, pains in the legs, followed by debility, &c.

The disease first appeared in the most crowded and filthy part of Paris, though eventually few or no parts of the city appear to have escaped its ravages, and its earliest and most numerous victims were the wretched inhabitants of narrow, filthy alleys, worn down by misery, debauchery, and privations of every description.

The following summary of the symptoms and treatment of the disease, which we translate from the *Archives Générales* for May last, is said to be the result of the examination of 6,094 patients admitted into the various hospitals of Paris between the 1st and 18th of April. Of the number just mentioned, 3,673 died; 1,594 were discharged cured or perfectly convalescent, and 837 remained under treatment.

"*SYMPTOMS. First stage.*—The individual, if at the time in good health, is seized with diarrhœa; this occurs in some instances very suddenly, the discharges being copious; in other cases the diarrhœa creeps on slowly. There is little griping, and no tenesmus. Soon after the liquid discharges from the bowels take place, a sense of weakness is experienced in the lower extremities, which is sometimes scarcely apparent, while at others it is so great that the patient cannot account for the feeling of exhaustion, so inexplicable by the symptoms under which he labours. Syncope is threatened on every movement of the body. In some cases there is an intense pain of the forehead, the peculiar character of which, the head appearing as it were constricted, and which causes to the patient great inquietude. By degrees anorexia comes on; nevertheless, in many cases, the individual is yet capable of following his customary occupations—frequently, also, the above symptoms, in persons of an energetic or careless disposition, attract little attention, and this leading to a false security, causes serious injury to the patients. This first stage of the disease continues one or two days, and frequently longer, extending sometimes beyond a week, and causing the utmost debility. It is very generally present, and is easily treated.

"*Second stage.*—This is marked by cramps in the limbs and vomiting. The stomach discharges, first the food contained in it, bilious matters are then thrown up, afterwards those of a serous character, which become mixed with whitish flocculi, giving to the discharges the appearances of rice water, or of gruel. The discharges per anum present similar appearances—at first solid,

they quickly become fluid, bilious, serous, and finally are composed entirely of a sero-mucous liquid of a whitish colour. So similar are the stools in appearance to the discharges from the stomach, that it is impossible, at first sight, to distinguish one from the other. They have always a peculiar smell, which is acid, but at the same time sickening, and readily recognised when once perceived. It has some analogy to that of the vapour of iodine, or of chlorine. The sweat of the patient seems to present the same odour, and which in the absence of other symptoms, is sufficient of itself to establish the diagnosis. The discharges from the stomach are more or less constant and abundant. To these succeed cramps, affecting successively the feet, hands, legs, and arms—they invade even the trunk, simulating pleurodynia, partial peritonitis, and more frequently lumbago. The more violent and general they become, the greater is the danger of the patient—the exceptions to this statement are extremely few. The pulse increases in frequency, being from one hundred and twenty to one hundred and thirty in the minute; the extremities become cold, and the arteries lose their normal tension—the blood which flows through them scarcely distending their parietes. The secretions are suppressed, or at least they are suspended; the respiration is laborious, sometimes more frequent and at others slower; but there is constantly a sensation of suffocation, produced by the constriction of the base of the thorax. The patient is restless, agitated, frequently prognosticating his speedy dissolution. The intellectual functions are unimpaired. The features of the face become sharpened, their ordinary expression is entirely destroyed; the eyes are bright, and the tongue pasty.

*“Third stage.”*—This is the stage to which the term *blue* has been applied, from the circumstance of the face and extremities assuming a bluish venous and very peculiar tint. To the phenomena of the preceding period, succeed now an extreme exhaustion; the skin becomes of a violet hue, the pulse extremely weak, frequently even entirely ceasing in the radial arteries. The respiration is deep and interrupted; the breath is cold, and has the peculiar odour already alluded to. The voice which had exhibited some degree of alteration during the preceding stage, becomes now extremely feeble, frequently inaudible. The intellectual faculties still remain, nevertheless the patient exhibits a carelessness or an apathy almost complete. The force and frequency of the cramps diminish; the evacuations from the stomach and bowels are less frequently repeated; the skin is bathed with a clammy sweat, and completely cold; the tongue itself is cold; the eyes half opened, present a bluish colour, an ecchymosis as it were of the inferior part of the cornea and conjunctiva; the pupil becomes dilated; the nose contracted; the face assumes a cadaveric appearance, and the limbs become stiff like those of a corpse. The skin is dry, and no longer presents its usual elasticity, so that a fold made in the skin of the neck or chest, remains permanent. During this period the patient dies without convulsions, or any apparent pain, and more frequently without the knowledge of those who surround him, so insensible is the transition from life to death, and so strongly does the living patient resemble the corpse.

*“Fourth stage.”*—Reaction sometimes occurs spontaneously, as we are informed by physicians who have seen it in patients left entirely without medical aid. To produce reaction should be the aim of the practitioner, for it indicates a tendency to a favourable termination. The pulse gains an increase of strength, and reappears in the extremities; the coldness of the surface is diminished; the skin loses its violet hue; the conjunctiva become injected; the voice becomes more sonorous; the tongue and breath acquire their usual warmth; the respiration is more frequent and easy. A hiccough sometimes occurs, as though the diaphragm, in resuming its functions, experienced a difficulty in their proper execution. There is no longer either diarrhoea, vomiting, or cramp. Frequently also, as the circulation becomes more free and vigorous, congestions of the brain take place; the head becomes red, and the patient may then sink rapidly. In other cases the degree of reaction is of a more natural character, and the recovery of the patient is speedily accomplished.

"Such is the general progress of the cholera morbus, as it presented itself in Paris. Many varieties, however, were observed in its phenomena, referable to the particular condition of the patient's system. Thus, in children, females, and very irritable persons, a form of cholera was observed in which the nervous symptoms predominated; the cramps were attended with true convulsions; symptoms were even observed which simulated tetanus; during the paroxysms of which the patient expired. In plethoric subjects, with large and robust bodies, the inflammatory form of the disease manifested itself more frequently; the tongue was red and irritated; the epigastrium was the seat of acute pain; there was violent fever; very copious vomiting; insatiable thirst, and other symptoms demanding evidently an antiphlogistic treatment. In other instances the asphyxial type predominated—the blueness of the skin occurred from nearly the commencement of the attack, and the death of the patient took place often very promptly.

"**TREATMENT.**—Notwithstanding all that has been said upon the existence in cholera of a gastro-enteritis or gastro-cephalitis, it is certain that in many cases, even of the most violent character, not the least morbid appearance is discoverable throughout the whole digestive tube. Sometimes we find in the small intestine, a number of either isolated and tolerably prominent follicles or of cellulated patches, having the same appearance as those found at a certain stage of ordinary typhoid affections. In some cases, but more rarely, we find traces of gangrene in the mucous membrane, or black spots which exhale a decidedly gangrenous smell. MM. Renauldin, Martin Solon, Andral and Louis, have met with these morbid appearances in several instances. They are nevertheless exceptions, and cannot serve as a basis, upon which to found a correct idea of the etiology of the disease. What seems more evident, is the alteration of the blood. The proportion of free carbon being double, and that of the colouring quadruple, to what they are in a state of health. The aqueous, albuminous, and fibrinous portions of the blood are almost entirely wanting—in consequence of which it assumes the pitchy consistency so frequently mentioned. If this, which is evidently the essential morbid change, be made the basis of the etiology of the disease, and consequently of its treatment, it may be demanded what relation does there exist between the affection to be removed, and the remedies employed to that end?

"In the first period, when the digestive tube appears to be the principal point of fluxion, it is all important to oppose this congestion. Of course, local bleeding and soothing injections are indicated. Some practitioners have employed other means; they have given ipecacuanha, and produced, in this manner, a sudden impression upon the whole intestinal tube. This shock has been salutary in a great number of cases; but it should not be concealed, that in other instances, it has appeared to have had an injurious effect.

"In the second period, the internal congestion is more extensive; it already impedes the play of many of the functions, and the necessity of directing our efforts to its removal increases rapidly. We may yet bleed if the pulse continues, and the patient is robust. Antispasmodics and hypnotic remedies, capable of arresting the progress of the nervous affection, which is now added to the first symptoms should likewise be administered. Iced drinks, even ice itself, are a very excellent means for arresting the vomiting. Injections, decidedly astringent, will succeed also in arresting the diarrhœa, and preventing that exhaustion which so rapidly follows the discharges from the stomach and bowels. The administration of ipecacuanha even in this stage of the disease, has appeared to be attended with good effects, in bringing back the natural secretions to take the place of those produced by the morbid stimulus. Under the effects of an emetic of this substance, the bile has been known to be copiously discharged; the white matter of the dejections to be diminished, and shortly to disappear; the bladder to become filled with urine, and the cramps to cease.

"With respect to the third period, a new order of phenomena predominate.

The coldness of the extremities, the feebleness of the respiration, the diminished action of the heart, all indicate a complete perversion of the functions of the organs. Even supposing, that during the two first stages of the disease, some portions of the mucous membrane of the digestive tube should become the seat of a slight phlogosis, it does not follow, that this should demand the entire attention of the practitioner, now when life itself is on the point of ceasing, and the actions of all the principal organs arrested. Under such circumstances, the subtraction of a small quantity of blood, is to say the least, useless; the impulsive power of the heart being almost destroyed, and the quantity of the circulating fluids greatly diminished. Our efforts should, therefore, be directed, to the organs which are still capable of feeling the influence of the impressions we desire to make upon them—the stomach, in this case, is one of the points the most accessible to our remedies. The most diffusible stimulants, as ether, ammonia, &c. will now be found to produce salutary effects, and give to the patient some chance of recovery. Even at this period vomits have been administered, and the spinal marrow has also been strongly stimulated. These two means have had the effect of rousing the nervous influence on the point of disappearing—of calling back the powers of life, and of producing reaction. It will readily be perceived that a crowd of analogous measures are all equally calculated to produce these important results. We must say, however, that in this stage the chances of success are but trifling.

"Reaction once obtained, we have to watch its progress and obviate any morbid effects it may occasion when not maintained within due limits. The convalescence from cholera is long, and painful. It requires a constant watchfulness on the part of the practitioner, and the utmost docility on the part of the patient. It is unhappily too true, that a great number of patients recovered from an attack of cholera, but too soon abandoned to themselves, have from the errors in regimen they have committed, been suddenly destroyed. The extreme debility which succeeds to the enormous discharges that take place in this singular disease, predisposes to serious organic affections—the most trifling pneumonia will in an instant become mortal—the slightest irritation of the stomach, will be at once accompanied with all the symptoms which characterize the typhoid diseases, and the patients sink, the more quickly as the plan of treatment proper in the latter affections cannot be put in practice in persons so completely exhausted."

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24. *Injection of Saline Solutions into the Veins.*—The following letter of Dr. LATTI, of Leith, to the Secretary of the Central Board of Health, furnishes us with an account of the employment of this remedy for the cure of cholera. The measure has been resorted to in New York and in Philadelphia, but the results are far from realizing the anticipations of Dr. L.

Sir,—My friend, Dr. Lewins, has communicated to me your wish for a detailed account of my method of treating cholera by saline injection into the veins, with which I now most willingly comply. My scope for observation, since I commenced this treatment, has been too limited to allow me to be very copious on the subject, but I think I can adduce sufficient proof to the unprejudiced, not only of its safety, but of its unquestionable utility. I have never yet seen one bad symptom attributable to it, and I have no doubt that it will be found, when judiciously applied, to be one of the most powerful, and one of the safest remedies yet used in the second stage of cholera, or that hopeless state of collapse to which the system is reduced.

Before entering into particulars, I beg leave to premise, that the plan which I have put in practice was suggested to me on reading in *THE LANCET*, the review of Dr. O'Shaughnessy's report on the chemical pathology of malignant cholera, by which it appears that in that disease there is a very great deficiency both of the water and saline matter of the blood. On which deficiency, the thick, black, cold state of the vital fluid depends, which evidently produces